Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

Please cancel Claims 1-27.

28. (Original) A method of providing a multi-layer semiconductor structure, the method comprising:

providing a first semiconductor structure having first and second opposing surfaces; and

disposing a laminate layer over a first one of the first and second opposing surfaces of the first semiconductor structure to provide a first semiconductor structure having a laminate layer disposed thereon.

29. (Original) The method of claim 28 further comprising:

disposing a handle member over the laminate layer.

30. (Original) The method of claim 29 further comprising:

a substrate on a second one of the first and second opposing surfaces of the first semiconductor structure.

31. (Original) The method of claim 30 further comprising:

removing at least a portion of the substrate from the second one of the first and second opposing surfaces of the first semiconductor structure to provide a semiconductor-handle complex.

32. (Original) The method of claim 31 further comprising:

providing a second semiconductor structure); and

aligning a first surface of the semiconductor-handle complex with a first surface of the second semiconductor structure.

33. (Original) The method of claim 32 further comprising:

bonding the first surface of the second semiconductor structure to the first surface of the semiconductor -handle complex.

34. (Original) The method of claim 33 further comprising:

removing the handle member and the laminate layer.

35. (Original) The method of claim 28 wherein providing a first semiconductor structure having first and second opposing surfaces comprises:

a substrate having first and second opposing surfaces; and

a first semiconductor structure over a first one of the first and second surfaces of the substrate.

36. (Original) The method of claim 28 wherein providing a first semiconductor structure having first and second opposing surfaces comprises:

providing a semiconductor structure comprised of a plurality of thin film semiconductor layers.

37. (Original) The method of claim 29 wherein disposing a handle member over the laminate layer comprises:

providing a handle substrate;

disposing a film layer over at least one surface of the handle substrate.

38. (Original) The method of claim 37 wherein the film layer is provided from one of: silicon nitride; and silicon dioxide.

39. (Original) The method of claim 38 further comprising disposing a laminate over a surface of the handle member.

40. (Original) The method of claim 29 wherein disposing a handle member over the laminate layer comprises disposing a handle member over the laminate layer such

that a surface of the laminate adheres to a surface of the handle member.

41. (Original) The method of claim 29 wherein disposing the laminate layer over a first one of the first and second opposing surfaces of the first semiconductor structure to provide a semiconductor structure having a laminate layer disposed thereon comprises providing a laminate layer comprised of a plurality of layers.

42. (Original) The method of claim 41 wherein providing a laminate layer comprised of a plurality of layers comprises:

providing a first layer corresponding to a release layer;

providing a second layer corresponding to a metal adhesion / diffusion barrier layer; and

providing a third layer corresponding to a fusion layer.

43. (Original) The method of claim 42 wherein the release layer comprises at least one of zirconium and aluminum.

44. (Original) The method of claim 42 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

45. (Original) The method of claim 42 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

46. (Original) The method of claim 41 wherein providing a laminate layer comprised of a plurality of layers comprises:

providing a first layer corresponding to a metal adhesion / diffusion barrier layer;

providing a second layer corresponding to a release layer; and

providing a third layer corresponding to a fusion layer.

47. (Original) The method of claim 46 wherein the release layer comprises at least one of zirconium and aluminum.

48. (Original) The method of claim 46 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

49. (Original) The method of claim 46 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

50. (Original) The method of claim 41 wherein providing a laminate layer comprised of a plurality of layers comprises providing a laminate layer comprised of two layers with a first one of the layers corresponding to a release layer and second one of the layers corresponding to one of:

a polymer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the thin film semiconductor structure;

an inorganic material; and

copper.

51. (Original) The method of claim 28 wherein disposing a laminate layer comprises providing a laminate layer comprised of a single layer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the semiconductor structure and having a characteristic such that the layer releases from the surface of the semiconductor structure in response to being exposed to a release agent.

52. (Original) The method of claim 29, wherein disposing a laminate layer comprises providing a laminate layer comprised of a single layer having an adhesive characteristic which allows the laminate layer to adhere to a surface of the handle member and having a characteristic such that the layer releases from the surface of the semiconductor structure in response to being exposed to a release agent.

53. (Original) The method of claim 31, wherein removing the substrate from the second one of the first and second opposing surfaces of the semiconductor structure to provide a semiconductor-handle complex comprises removing a portion of the second

surface of the semiconductor-handle complex using at least one of: a mechanical grindback, an aqueous chemical etch; a vapor chemical etch; and a plasma etch.

54. (Original) The method of claim 33, wherein bonding the first surface of the second semiconductor structure to the first surface of the semiconductor-handle complex comprises providing bonding pads on at least one of the first surface of the second semiconductor structure; and the first surface of the semiconductor-handle complex.

55. (Original) The method of claim 54, wherein the bonding pads are provided from at least one of: copper; a polymer; and an inorganic dielectric.

56. (Original) The method of claim 34 wherein removing the handle member and the laminate layer comprises using at least one of:

an aqueous-activated method;
a vapor-activated method;
a light-activated method;
a temperature-activated method;
an ion bombardment-activated method;
an electrically-assisted method; and
a mechanical method.

57. (Original) The method of claim 28 wherein the semiconductor structure corresponds to a die-to-die semiconductor structure.

58. (Original) The method of claim 28 wherein the semiconductor structure corresponds to a die-to-wafer semiconductor structure.

59. (Original) The method of claim 28 wherein the semiconductor structure corresponds to a wafer -to-wafer semiconductor structure.

60. (Original) The method of claim 28 wherein:

providing a first semiconductor structure having first and second opposing

surfaces comprises providing a first semiconductor structure having a face surface and a backside surface; and

disposing a laminate layer comprises disposing a laminate layer over the face of the first semiconductor structure to provide a semiconductor structure having a laminate layer disposed thereon.

61. (Original) The method of claim 32 wherein:

providing a second semiconductor structure comprises providing a second thin film semiconductor structure; and

aligning a first surface of the semiconductor -handle complex with a first surface of the second semiconductor structure comprises aligning the backside of the semiconductor-handle complex with a face of the second thin film semiconductor structure.

62. (Original) The method of claim 1 wherein:

the first semiconductor structure corresponds to an original semiconductor substrate;

the first semiconductor-handle complex having a substrate portion corresponds to an original-handle complex having a substrate portion;

the handle-semiconductor complex corresponds to a handle-thin film complex;

the second semiconductor structure corresponds to a second substrate.

63. (Original) The method of claim 62 wherein:

the original semiconductor substrate corresponds to a first thin-film substrate

the second substrate corresponds to a second thin-film substrate

64. (New) A multi-layer semiconductor structure comprising:

a first semiconductor structure having first and second opposing surfaces; and

a laminate layer over one of the first and second opposing surfaces of the first semiconductor structure to provide a first semiconductor structure having a laminate layer disposed thereon.

65. (New) The structure of claim 64 further comprising a handle member disposed over the laminate layer.

66. (New) The structure of claim 64 further comprising a substrate disposed on a second one of the first and second opposing surfaces of the first semiconductor structure.

67. (New) The structure of claim 64 wherein the first semiconductor structure comprises a plurality of thin film semiconductor layers.

68. (New) The structure of claim 65 further comprising a film layer disposed over at least one surface of the handle member.

69. (New) The structure of claim 68 wherein the film layer is provided from one of: silicon nitride; and silicon dioxide.

70. (New) The structure of claim 68 further comprising a laminate disposed over a surface of the handle member.

71. (New) The structure of claim 64 wherein said laminate layer comprises:
a first layer corresponding to a release layer;
a second layer corresponding to a metal adhesion / diffusion barrier layer; and
a third layer corresponding to a fusion layer.

72. (New) The structure of claim 71 wherein the release layer comprises at least one of zirconium and aluminum.

73. (New) The structure of claim 72 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

74. (New) The structure of claim 73 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

75. (New) The structure of claim 64 wherein said laminate layer comprises:
a first layer corresponding to a metal adhesion / diffusion barrier layer;
a second layer corresponding to a release layer; and
a third layer corresponding to a fusion layer.

76. (New) The structure of claim 75 wherein the release layer comprises at least of one of zirconium and aluminum.

77. (New) The structure of claim 76 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

78. (New) The structure of claim 77 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

79. (New) The structure of claim 64 wherein said laminate layer comprises two layers with a first one of the layers corresponding to a release layer and second one of the layers corresponding to one of:
a polymer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the thin film semiconductor structure;
an inorganic material; and
copper.

80. (New) The structure of claim 64 wherein said laminate layer comprises a single layer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the semiconductor structure and having a characteristic such that the layer releases from the surface of the semiconductor structure in response to being exposed to a release agent.

81. (New) The structure of claim 64 wherein the semiconductor structure corresponds to a die-to-die semiconductor structure.

82. (New) The structure of claim 64 wherein the semiconductor structure corresponds to a die-to-wafer semiconductor structure.

83. (New) The structure of claim 64 wherein the semiconductor structure corresponds to a wafer-to-wafer semiconductor structure.

84. (New) The structure of claim 64 wherein a portion of the substrate from the second one of the first and second opposing surfaces of the first semiconductor structure and the handle member provide a semiconductor-handle complex and wherein the structure further comprises:

a second semiconductor structure corresponding to a second thin film semiconductor structure disposed over a first surface of the semiconductor-handle complex with a first surface of the second thin film semiconductor structure aligned with a backside of the semiconductor-handle complex.

85. (New) The structure of claim 84 wherein:

the first semiconductor structure corresponds to an original semiconductor substrate;

the first semiconductor-handle complex having a substrate portion corresponds to an original-handle complex having a substrate portion;

the handle-semiconductor complex corresponds to a handle-thin film complex; and

the second semiconductor structure corresponds to a second substrate.

86. (New) The structure of claim 85 wherein the original semiconductor substrate corresponds to a first thin-film substrate.